



December 27, 2013

Mr. Jason Metzger  
Georgia Department of Natural Resources  
Response and Remediation Program  
2 Martin Luther King, Jr. Drive  
S.E. Suite 1462, East Tower  
Atlanta, Georgia 30334-9000

RE: Voluntary Remediation Program Semi-Annual Progress Report #3  
Tara Shopping Center  
8564 Tara Boulevard, Jonesboro, Clayton County, Georgia  
Tax Parcel ID 13242D B001; HSI Site No. 10798

Dear Mr. Metzger,

On behalf of Ashland Inc. (Ashland), EHS Support LLC (EHS Support) is submitting this Semi-Annual Progress Report for the project referenced above. As you are aware, remediation activities are being completed under the Voluntary Remediation Program (VRP). In 2013, Ashland implemented In-situ Solidification Stabilization (ISS) using a large diameter auger to treat tetrachloroethene (PCE) impacted soils within the source area (former dry cleaner site). These activities were completed between June 2013 and October 2013. Final site restoration was completed between November and December 2013.

Pursuant to the VRP conditional approved letter issued on June 28, 2012, the purpose of this progress report is to provide a brief summary of activities completed between July 2013 and December 2013. A remedial implementation completion report summarizing remedial activities to remediate unsaturated and saturated soil within the source area will be submitted to the Georgia Environmental Protection Division (EPD) in early 2014. The objective of the remedial implementation completion report is to obtain Georgia EPD's approval/acceptance of soil remediation activities so that a final groundwater remedy can be developed for PCE impacted groundwater.

Provided below is a brief summary of activities completed following the submittal of the June 28, 2013 semi-annual progress report.

#### **Source Area Remediation**

Source area remediation was implemented in accordance with the scope of work outlined in WRScompass' Remedial Design Plan dated May 2013. Approximately 15,327 cubic yards of soil were proposed for treatment based on the column layout provided in the Remedial Design Plan Figure 5-1. Soil treatment depths ranged from 45 feet below grade within the heaviest impacted area (Area 1) to 25 feet below grade around the perimeter (Areas 1A, 1B, 2, and 3).

#### **Implementation and Verification Sampling**

Verification soil samples were collected at a rate of 1 per 250 cubic yards immediately following soil treatment. Samples were allowed to cure for no less than 7 days and upward of 40 days prior to laboratory analysis. Verification soil samples were analyzed in a laboratory setting for the performance criteria established for the project including strength, hydraulic conductivity and leachability.

The performance criteria limits for this project were established based on the Interstate Technology Regulatory Council (ITRC) guidance document *Development of Performance Specifications for Solidification/Stabilization, July 2011* and the Georgia EPA Maximum Contaminant Level for groundwater. Samples that failed the initial criteria in one or more parameters were rerun at a later cure time. If the sample continued to fail the performance criteria, the soil column, including columns treated between confirmation sample locations, were retreated and verification sampling was repeated at the same or similar depth interval. The results of verification sampling will be provided in the forthcoming remedial implementation report.

#### Site Restoration

Following soil mixing, the treatment area was graded and compacted with sub-base material. The entire treatment area was paved with asphalt. The property owner has indicated that it does not plan to reconstruct the two units removed as part of site remediation activities; therefore, the footprint of the previous building was also paved. The specification of site restoration, including the limits of cap and cover will be provided in the forthcoming remedial implementation report

#### Environmental Covenant

An environmental covenant is being drafted for the property. A final environmental covenant will be provided under a separate cover.

#### Monitoring Well Inspection and Maintenance

Monitoring wells were inspected during the May 2013 groundwater sampling event and inspected again in August 2013. A list of repairs was developed and well repairs were completed as follows:

- All monitoring wells (with exception of newly installed monitoring wells in 2012) received new expansion caps and locks. Missing bolts were replaced as necessary.
- Monitoring well cluster MW-10A/B/C was within the vicinity of the treatment area (staging area). New flushmount covers and concrete pads were installed to meet the final grade after repaving and to improve the integrity of these wells. Each well was redeveloped to remove fine-grain sediments.
- New flushmount covers and pads were installed at monitoring well cluster MW-13A/B/C. These wells are located at 8660 Tara Boulevard in rear of property and adjacent to the loading dock. Each well was redeveloped to remove fine-grain sediments.
- Portland cement was used to fill the annular space around monitoring well MW-4B which was exposed to approximately 5 feet below grade. Monitoring well MW-4B is screened at 50 to 60 feet below a grade; therefore this well is not compromised.
- The following wells were redeveloped based on discrepancies between total depth during installation and recorded total depth in August 2013: MW-8A, MW-11C and MW-19A.

A summary of the professional engineer's time associated with remediation implementation is provided as **Attachment A**.

#### **Groundwater Investigation Activities**

A comprehensive groundwater sampling event was completed as part of the pre-remediation activities during the week of May 6, 2013. The results were presented in the June 28, 2013 progress report. Errors were later identified on Figure GW-1 which presented incorrect sampling dates and concentrations due to a formatting error. This figure has since been corrected and is provided as Figure GW-1 (Revised).

In July 2013 the entire monitoring well network was resurveyed by professional surveyor Travis Pruitt & Associates, Inc. of Norcross, Georgia. The survey information is being used to develop groundwater potentiometric surface maps and update geologic cross-sections which will be used to update the groundwater site conceptual model.

#### Off-site Monitoring Well Installation

On March 26, 2013, Ashland submitted a formal request to the State of Georgia Department of Transportation (DOT) to request access within the DOT right-of-way (ROW) along Tara Boulevard (State Highway 41) and Fayetteville Road (State Highway 54). The purpose of this request was to install monitoring wells east of source area (MW-2 cluster), as well as, west and downgradient of Site monitoring well clusters MW-7 and MW-8.

On Friday, June 21, 2013, Mr. Chris McKinney of Georgia DOT contacted EHS Support and stated the permit application to install monitoring wells within the public right of way was placed in the mail. Ashland has since submitted the Performance Bond to the State for monitoring wells located west of the Site along Tara Boulevard. It was later determined that the Fayetteville Road /State Highway 54 is owned by the City of Jonesboro. Mr. Derry Walker, representative for the City of Jonesboro, contacted EHS Support and requested Ashland negotiate with the private land owner west of Fayetteville Road. In August 2013, EHS Support met with a representative of the landowner who requested substantial financial compensation for access to the property. Currently, Ashland has not determined the final location of monitoring wells east of the Source Area. An alternate location, based on topographic and suspected hydrogeologic setting is currently being evaluated.

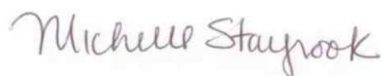
#### **Remediation Schedule**

In the June 2013 progress report, Ashland proposed to complete additional desk-top reconnaissance on the historical operations at 8660 Tara Boulevard to evaluate the potential for historical operation contributing to VOCs in the subsurface. This will be completed as part of remedial activities in 2014.

Ashland will finalize soil boring and well construction logs for newly installed monitoring wells (MW-18A/B, MW-19A/B/C and MW-20C). This information will be used to update lithologic cross-sections and identify information needed to update the preliminary groundwater conceptual model. Based on this information, Ashland will finalize the location of groundwater delineation monitoring wells. Recommendations based on these findings will be presented to Georgia EPD under a separate cover.

If you should have any questions regarding the information presented in this progress report, please contact me at [michelle.stayrook@ehs-support.com](mailto:michelle.stayrook@ehs-support.com) or 412-807-1494. Alternatively you can contact Michael Dever at [mbdever@ashland.com](mailto:mbdever@ashland.com) or 614-790-1586.

Sincerely,



Michelle Stayrook  
EHS Support  
Project Manager

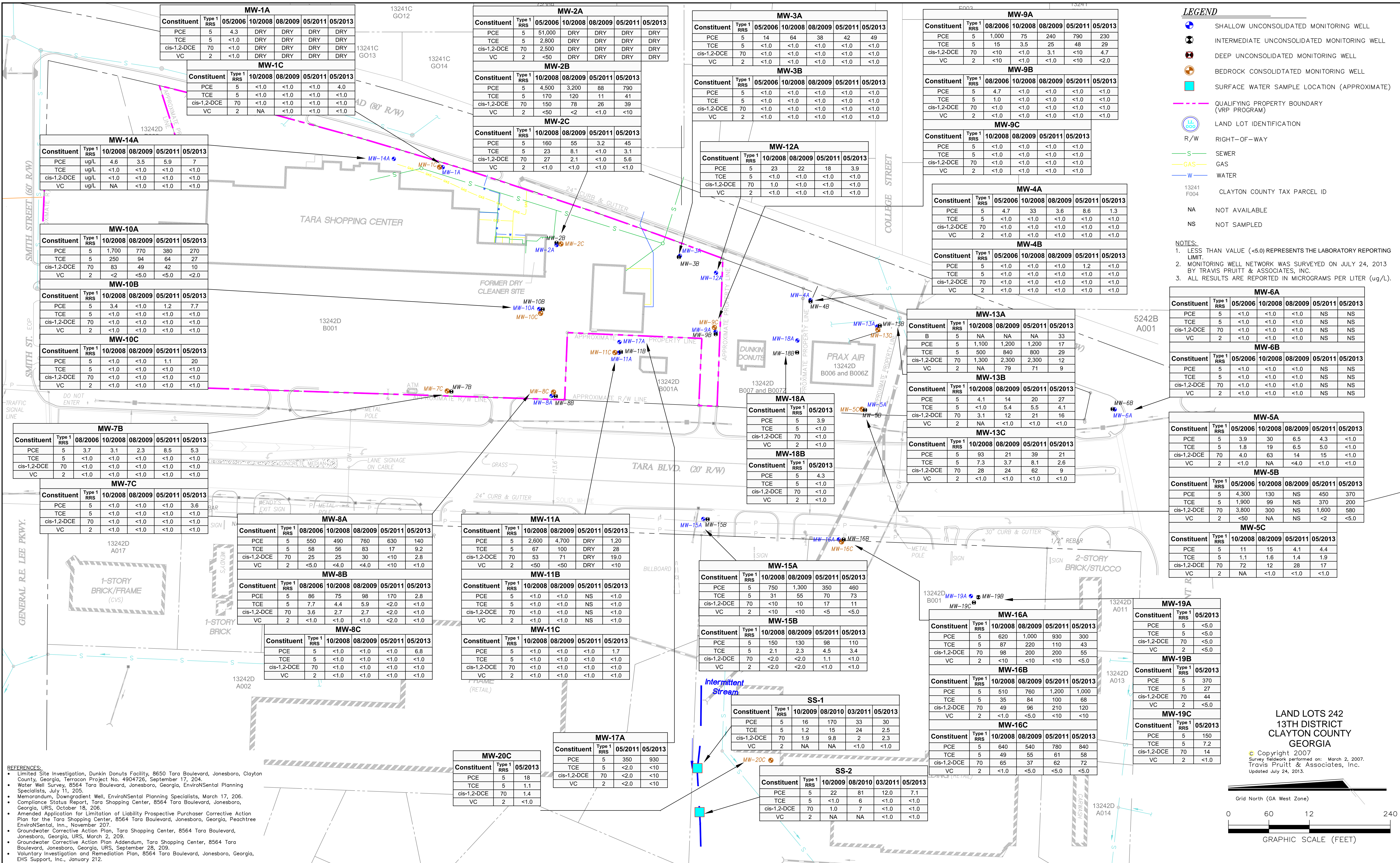
Attachments

cc: Michael Dever, Ashland (email)

Rich Williams, Esq. Ashland (email)  
Kristin VanLandingham, EHS Support (email)

## FIGURE







**ATTACHMENT A**  
Professional Services

**ATTACHMENT B**

**Tabulated Summary of Professional Engineer and Geologist Time (Period June 1, 2013 through November 30, 2013)**

**Tara Shopping Center, Jonesboro, GA**

**Voluntary Remediation Program (HSI 10798)**

<b>Professional Engineer</b>	<b>Date</b>	<b>Hours</b>	<b>Description</b>
Kristin VanLandingham, PE	6/7/2013	2	Conference call with project team to discuss action items and schedule for ISS implementation; update Smartsheet schedule based on WRS revised schedule
	6/10/2013	6	Prepare Field Operations Plan; ISS implementation resource identification and scheduling
	6/13/2013	2	Draft Field Operations Plan
	6/14/2013	2	Project Team call to discuss action items and schedule for ISS implementation; make modifications to Field Operations Plan
	6/19/2013	1	Draft Field Operations Plan
	6/17/2013	9	Project kick-off meeting; oversight
	6/18/2013	6	Project kick-off meeting; oversight
	6/24/2013	1.5	Weekly ISS Implementation conference call; review previous week field notes, forms and photos
	6/27/2013	1.5	Discussion with field oversight team regarding crane incident, schedule, site activities, outstanding issues
	7/1/2013	1.5	Weekly ISS Implementation Call; review field logs/photos from previous week.
	7/8/2013	1.5	Weekly ISS Implementation Call; review field logs/photos from previous week.
	7/15/2013	1.5	Weekly ISS Implementation Call; review field logs/photos from previous week.
	7/16/2013	1	Prepare for Site Visit
	7/17/2013	10	Site visit to oversee ISS
	7/18/2013	1	Update team on Site visit
	7/19/2013	1	Project call to discuss ISS schedule and upcoming activities
	7/22/2013	1.5	Weekly ISS Implementation Call; review notes, forms and photos from previous week's work
	8/1/2013	0.5	Review and discuss recent SPLP results
	8/5/2013	1	Resourcing for ISS oversight the last two weeks of August
	8/6/2013	2	Call with Mark Smith to go over work status; review documentation and photo uploads from previous work week.; Discuss oversight resourcing for the last two weeks of August; review results of strength and conductivity testing
	8/12/2013	1	Weekly ISS Implementation Call
	8/19/2013	2	Weekly ISS Implementation Call; discuss schedule and retreat plan with Michelle; review latest SPLP and physical parameter results; review notes, field logs, and photos from previous work week.
	8/20/2013	0.5	Follow-up with field personnel on work progress
	8/26/2013	2	Weekly ISS Implementation Call; review previous week notes, logs and photos; discuss September oversight schedule
	9/3/2013		Weekly ISS Implementation Call; review RFP, Bid, and SOW regarding area of asphalt to be replaced and discuss with Michelle
	9/6/2013		Correspondence with Mick and Michelle on area of ISS treatment proposed; follow up with team on following weeks oversight schedule
	9/9/2013		Weekly ISS Implementation Call
	9/10/2013		Call with Michelle and Mark to discuss WRS change order
	9/19/2013		Call with WRS to discuss results of retreat verification sampling and path forward
	9/30/2013		Weekly ISS Implementation Call; review and discuss verification sampling data; discuss sample ID nomenclature with Mark and Kris; discuss options with lab regarding elevated detection limits at O-25
	10/4/2013	1	Review preliminary SPLP data from TestAmerica
	10/7/2013	1	Weekly ISS Implementation Call
	10/22/2013	1	Conference call to discuss our understanding of minimum site restoration requirements